AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-265

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

ANS is pleased to announce the 20th Space Symposium and AMSAT-NA annual Meeting. This conference is scheduled for November 7-11, 2002 in Fort Worth, Texas, and will chronicle recent and future Amateur Radio satellite technology developments, including an Electronic Surplus Stores tour on November 7th; a Field Operations Breakfast and a tour of the Lockheed Martin Aeronautics Company on November 10th. AMSAT Members are welcome to attend the AMSAT Board of Directors Meeting on November 10th and 11th.
The Chair for the 2002 event is Keith Pugh W5IU.

[ANS thanks Keith Pugh, W5IU, the 2002 event chairman]

SB SAT @ AMSAT $ANS-265.01
AMSAT BOARD OF DIRECTIORS ELECTION RESULTS

AMSAT News Service Bulletin 265.01 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.01

The results of balloting for election to the AMSAT-NA Board of Directors are as follows:

Tom Clark W3IWI.....708

Keith Baker KB1SF.....647

Bruce Paige KK5DO.....480

Rick Hambly W2GPS.....460

Steve Diggs W4EPI.....218

Thus, KB1SF, W3IWI and KK5DO retain their Board seats for the next two years. W2GPS is the First Alternate and W4EPI is the Second Alternate.

The ballots were bundled and counted as they arrived each week. Ballots and summary sheet are available for inspection at the AMSAT business office.

This information was provided by Bill Hook, W3QBC who was in charge of the count and certifying the results.

Congratulation to those who were elected and thanks to all who particpated in this important election, including all those members who voted.

Also, thanks to Bill Hook and Martha for their work in collecting and counting the ballots.

Bill Tynan, W3XO
Board Chairman

[ANS thanks Bill Tynan W3XO for the above information.]

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SB SAT @ AMSAT $ANS-265.02
ANTENNA HELP NEEDED FOR US NAVAL ACADEMY SATELLITE LAB NEXT PCSAT

AMSAT News Service Bulletin 265.02 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.02

Bob Bruninga WB4APR of the PCsat Project Team this week put out a call for an antenna designer. Help is needed for a funded Launch opportunity for the next PCsat in less than a year. The PCsat team, at the US Naval Academy Satellite Lab, needs a good RF designer and antenna modeler to help out.

The free ride is because PCsat must fit inside of a perfectly spherical but totally passive mirror surfaced 18" diameter ball. The antenna must be totally internal and have absoultely zero externals. Bob notes that, "Last year we built a 'split-sphere' model and EZNEC and our full size model showed that with a 1 inch insulated gap between the upper and lower hemi-spheres we can get the thing pretty close to a good match for 145.825 MHz with the whole thing pretty much acting like a dipole."

With 3 other satellites under design and construction at the US Naval Academy
Satellite Lab, and Bob being the only HAM/Comm guy, he just doesn't have time
to do all that he would like to to make sure this split-sphere design will tune up.

The Satellite Lab's design to date is on-line at:
http://www.ew.usna.edu/~bruninga/ande.html

The PCsat style digipeater will run for 2 years with 8Kg of Lithium primary cells because no external solar power is possible.

Bob summed up his help wanted with, "What I need is someone who really knows what they are doing, that is willing to give their 'life' to this antenna design over the next 9 months for the sake of getting another UI packet digipeater into space. I just thought I'd ask." Bob can be contacted via wb4apr@amsat.org.

[ANS thanks Bob Bruninga WB4APR for the above information.]

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SB SAT @ AMSAT $ANS-265.03
LAST HURRAH FOR PCSAT

AMSAT News Service Bulletin 265.03 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.03

PCsat entered full sun again this week on 18 September, and for almost two weeks, will have plenty of sun to support both DAY and

NIGHT operations which include passes are near sunrise and sunset,
even though you may be in dark.

These full sun periods only happen about once every 3 months and we do
NOT expect PCsat to remain viable into the fall and winter as solar
angles degrade in the northern hemisphere (where our best solar panel
points up). So consider this a last opportunity to conduct any
experiments.

During this period:

1) Use the digipeater path VIA W3ADO-1 on 145.825 (will always work)

2) Or use VIA RELAY or VIA WIDE or VIA ARISS (should work if we load it)
   (This lets you simply QSY any APRS device to 145.825 and it will work
   (just like it does on your terrestrial frequency).

3) The side B transponder with un-published uplink and 144.39 downlink
   is also available for any special travelers or experiments in region
   2 and 3.

4) The onboard GPS may be enabled on most passes over the USA for our
   students to get GPS data. If the GPS is on, you should receive
   standard $GPGGA data on 145.825

Note, it is useful if you add an additonal "SGATE" HOP on the end of your
path after the packet is digipeated via PCsat so that it can be further
digipeated on the ground one more hop. The recommended paths are VIA
W3ADO-1,SGATE or VIA WIDE,SGATE.

The PCsat WEB page is at:
http://www.ew.usna.edu/~bruninga/pcsat.html

[ANS thanks Bob Bruninga WB4APR for the above information.]

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SB SAT @ AMSAT $ANS-265.04
MESSAGE COLLECTION ANNOUNCED FOR VUSAT VOICE BEACON

AMSAT News Service Bulletin 265.04 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.04

Nagesh Upadhyaya VU2NUD, Co-ordinator, Amsat-India sent this
request to the amateur satellite community this week.

As you all must be knowing by this time, VUSAT will carry a message
beacon which will playback on command, pre-recorded voice messages.
This will be on FM ham band. It can be heard by radio amateurs all
over the world. It can also be listened to by all those who have
simple FM receivers tuned to ham bands.

Hereby we want to invite your ideas regarding the messages. Think of
short, crisp, meaningful, attractive messages of duration 15 seconds.

You may send one or more messages for selection. Messages may be related
to ham radio, space, amateur satellites, famous quotes, patriotic songs
or sayings, well-being of human race, etc.,

If your message is selected, it will be recorded for VUSAT and will
be beamed from the satellite!!

Please send your entries to Srikanth, VU2SBJ : email: sri@ebhats.com
with cc to me: ham@vsnl.com. Mark clearly in the subject: Message for
Beacon.

The AMSAT--India website is at:
www.amsat-india.org
www.amsatindia.org

And, an e-mail discussion group is available at:
vusat-subscribe@yahoogroups.com

[ANS thanks Nagesh VU2NUD and AMSAT-India for the above information.]

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SB SAT @ AMSAT $ANS-265.05
GUIDE FOR VIEWING AO-40 PICTURES

AMSAT News Service Bulletin 265.05 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.05

Because of the increasing ALON, it is now necessary to take pictures for
attitude determination at the end of one orbit, and download them after
apogee on the next orbit.

Many interested amateurs have asked whether these AO-40 photos available
to be viewed and if so where?

The pictures taken by AO-40 are stored with the telemetry files. All
telemetry captured from AO-40 is available online at:

http://www.amsat.org/amsat/ftp/telemetry/ao40/

The telemetry archive is ordered by date down to the month level. Inside
the month directory you will find zip files, 1 file per orbit. If you look
at the zip file sizes, then you'll see that some are substantially larger
than others. These will be the files containing D-blocks. The D blocks are
used to download the jpeg images (and other data) from the spacecraft.

Details of how to convert raw D blocks into images you can view can be
found here:
http://www.amsat.org/amsat/sats/ao40/d-block-jpeg.html

If the command stations have sent in the decoded and/or despun jpeg images
to the archive, which they generally do. Then the orbit zip file will also
include a zip file named something like 835JPEGs.zip, this file contains the
images in viewable form.

The de-spun images often include markings showing angles etc. These are
used in for attitude determination such as working out ALON/ALAT.

[ANS thanks Paul VP9MU for the above information.]

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SB SAT @ AMSAT $ANS-265.06
AO-40 UPDATE

AMSAT News Service Bulletin 265.06 From AMSAT HQ

SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.06

The eclipse period has ended so the middle beacon (MB) off segment has been terminated. The MB is once again on continuously. In addition, the transponder time has been slightly extended, and the N-blk has been simplified.

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N  QST AMSAT AO-40        S2 Downlink              2002-09-19
                   MA      020   110   246   020
                   ---------7-----1-----0-----7
                   MB       |  *  |  *  |  *  |
                   RUDAK    |     |     |     |
                   V-Rx     |     |     |  *  |
                   U-Rx     |  *  |  *  |     |
                   Passband |     |  UL |     |
```

When the ALON/ALAT is significantly altered, the M-blk gets modified and also posted to the AMSAT-BB list. However, there has been no significant change in ALON/ALAT from the last posting.

The AO-40 Command Team is about to raise ALAT quite a bit, followed by about 3 weeks of "drifting" past the sun. During this time, the squints will be poor, as will the solar angles. The transponders may be off for much of this time because of the poor conditions and to conserve power. At the end of that time, ALON will be ~335 degs, we will be able to lower ALAT to 0, restore transponder usage, and have some steady improvement over current conditions. By about November 15th, if all goes well, we should be back to ALON/ALAT = 0/0/, where we can stay for ~3 months. More details will follow in a few days.

[ANS thanks Stacey Mills w4SM and the AO-40 Command Team for the above information.]

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SB SAT @ AMSAT $ANS-265.07
ANS GOOD NEWS DEPARTMENT

AMSAT News Service Bulletin 265.07 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.07

Here's this week's good news!

** Over the past twelve months Gene WA4UKX and his two teenage sons Josh KG4LEX and Gene Jr. KG4HPW have made five individual contacts with the ISS. One QSO with Valery Korzun which lasted aprox. 4 min. What makes these contacts unique is that all were made at different times using 45 watts power and a discone antenna mounted in the attic! 73, Gene WA4UKX

The ANS Weekly Bulletins has begun another publication project. We'd like to hear of your successes as you get things to work on a new satellite, work your first satellite DX, etc. Who heard AO-40 for the first time this past week? Who made their first AO-40 QSO? Did you get digipeated by ISS for the first time? We'd like to briefly recap the good news. Send your reports to JoAnne Maenpaa at wb9jej@amsat.org.

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SB SAT @ AMSAT $ANS-265.08
AMSAT NEWS IN BRIEF

AMSAT News Service Bulletin 265.08 From AMSAT HQ
SILVER SPRING, MD. SEPTEMBER 22, 2002
To All RADIO AMATEURS
BID: $ANS-265.08

** Here's one to check out for the next shuttle launch. Try watching the webcam mounted on the external fuel tank:
http://spaceflightnow.com/station/sts112/020912shuttlecam/
-- Alan ZL2VAL

** The N4ISS Experimenter's Group ARC website is being rebuilt at QSL net. The previous site at homestead.com is no longer available. It will take a month or two to complete, because we're totally revamping the site. I would like to add a page of links to ARISS websites with QSO audio files. If you would like to have your website included in our list, or know of some links, please e-mail us your site at n4iss@amsat.org
-- Al KD4SFF

** American astronaut Peggy Whitson KC5ZTD, aboard the International Space Station since June 7, has been named NASA'S ISS science officer, the agency announced Monday. --SpaceDaily and NASA

** The undocking of a Russian Progress supply vehicle from the International Space Station and the arrival of a new Progress spacecraft will be covered on NASA Television, beginning next week. The Progress 8 capsule will undock from the aft port of the Zvezda Service Module on Tuesday, Sept. 24, at 9:57 a.m. EDT, with coverage of its departure beginning on NASA TV at 9:30 a.m. EDT. -- NASA

** Last week ANS reported on the mysterious object named J002E3 discovered in orbit around Earth on September 3. Since then University of Arizona astronomers have analyzed spectrographic data from the object. The colors were consistent with the spectral properties of an object covered with white Titanium oxide (TiO) paint. The Apollo Saturn S-IVB upper stages were painted with TiO paint. The object is most likely a S-IVB from either Apollo 8, 10, 11, or 12, with Apollo 12 being most likely, the UA researchers conclude.
-- University of Arizona

** 100th Extra-solar planet discovered. British astronomers, together with Australian and American colleagues, have used the 3.9m Anglo-Australian Telescope in New South Wales, Australia to discover the 100th new planet outside our Solar System to be detected. The new planet, which has a mass about that of Jupiter, circles its star Tau 1 Gruis about every four years. Tau 1 Gruis can be found in the constellation Grus which is about 100 light years away from Earth.
-- Particle Physics and Astronomy Research Council, Swindon, U.K.

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Thanks and 73,
This weeks ANS Editor:
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